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ABSTRACT

Major national trends and their effects on the future of education are examined. Demographic events that affected schools include the postwar baby boom and the migration from the Northeast to the sunbelt region. Factors affecting the college curriculum include: (1) enrollment projections, (2) decline in literacy, (3) decline in mathematics and science competency, (4) language requirements, (5) increased need for lifelong learning and the necessity for training and retraining, (6) the question of preparation for specific career versus general skills, (7) the relevance of the humanities in an increasingly complex and impersonal world, and (8) the future job market. Attention is also directed to issues related to the responsibilities of the community colleges and secondary schools, funding of community colleges, and politics and the community college. It is suggested that marketing and strategic planning are essential for community college survival. Finally, new types of jobs that will become available in the next few decades are considered in the following areas: computers, telecommunications, robotics, and other technologies (e.g., laser, conservation, and hazardous waste technologies). (SW)

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What's on the Horizon?

Trends Impacting Higher Education

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What's on the Horizon?

Humanity is entering a new era. The explosion of major national changes in the past four decades has made this evident. A substantial amount of recent literature points out that higher education must be prepared for these changes in order to meet its mission.

Brodzinski (1979) has listed many of the changes occurring over the past thirty years that have caused what he calls "institutional future shock." Among these are changes in enrollment involving quantity, ability levels, attitudes, needs, and characteristics of students; faculty changes including increases in ranks, unionization, then lay-off of tenured personnel; changes in administrative procedures, marketing techniques, computerization of records, tuition and funding; and responses to legislation such as affirmative action and Title IX. Brodzinski summarizes, saying, "The point is that change in higher education has been constant and overwhelming; no sooner have we adapted and reoriented ourselves to a new set of realities than the problems and circumstances we must address are quickly changed" (p. 19).

John Naisbitt (1982) provides a view of the future in Megatrends as he categorizes ten national trends which will force changes on education as well as on our way of living. He emphasizes technology and information, individual involvement, and a broader view of approach toward topics ranging from the economy to organizational planning to personal options. Marvin Cetron and Thomas O'Toole (1982) forecast changes based upon data analysis of current trends. They maintain that times are changing so fast, prosperity is now dependent upon the ability to predict and respond to future events. Marvin Peterson (1976), as

a member of the Board of Directors of the Society for College and University Planning, brings these thoughts home by pointing out the relationship between the form and effectiveness of institutional planning, and its wisdom and flexibility to respond to constantly shifting issues and challenges which are often dimly foreseen.

The purpose of this paper is to investigate some of these trends and their effects on the future of education. It can provide an orientation for the reader to become aware of the vast changes occurring in our midst. More importantly, it emphasizes the necessity of our institution to be sensitive and responsive to the social, economic and political directions of our culture.

Demographic Changes

Two profound but subtle demographic events have characterized the last half of this century. They are the post-war baby boom, followed by migration from the northeast to the sunbelt. Both events are intimately interrelated with the economic recession.

The Aging of the Baby Boom

With regard to the baby boom, the topic is sheer numbers. Between the years 1946 and 1962, the annual number of births nationwide often exceeded four million. In Fortune Magazine, Guzzardi (1979) likened the aging process of this group to the movement of a pig through the body of a python. At whatever age they happen to be, they move through society with devastating effects. They overload every societal system and infrastructure, and then leave a void in their wake.

Guzzardi predicts the most dramatic demographic change of the 1980's to be the sharp and continuous decline of people between the ages of fifteen and twenty-four, the traditional student ages. Hokenson (1983) documents this expected decline to be on the order of 320,000 young adults. Silber (1978) translates it into 25% fewer students in college. This demographic turbulence is reaching an educational system that had managed to change to accommodate the increase of 31 million young adults between 1960 and 1980. Enrollments in colleges will fall even more than the college-age cohort because the "glut of former college students in the labor market is driving down the salaries of college graduates" (Carnegie Council, 1980, p. 2). According to Gorwitz (1982), the stability of college enrollment is going to depend upon (a) what proportion of this age cohort will seek admission to higher education, (b) the extent to which competitive institutions maintain their degree of selectivity, (c) the extent to which they market their programs, (d) the development of new services and programs, both credit and non-credit, for older students, and (e) future levels of student aid programming.

Meanwhile, the baby boom matures to swell the ranks of those aged 30-45. This is the heart of the labor force for the 1980's, and amplifies the unemployment problem caused by a sagging economy. Gorwitz concurs that the current high levels of unemployment are in part related to the number of individuals of working age. The competition for high-paying jobs is even keener, as workers find themselves unable to actualize their career aspirations. Richard Freeman of the National Bureau of Economic Research (in Guzzardi, 1979) compiled data demonstrating that workers in this cohort find themselves making less real income relative to those of the previous decade.

Predicting further toward the turn of the century, when the population bulge becomes senior citizens, the void it leaves postulates a shortage in the labor force. Demand may produce an expansion in opportunities for the elderly to remain on the job, emphasizing a need for mid-career retraining paced by technology. Some industries will flourish from the increasing number of retired people requiring cultural, recreational and leisure activities as well as health care and social services (Gorwitz, 1982).

The North-South Shift

The United States Census documents movement of the nation's population between 1970 and 1980. Cities like Houston, San Diego, San Jose and Phoenix have experienced more than a 25% population increase, while Detroit records a 20% loss. (Michigan Information Center (MIC), Information Bulletin 1982-3). Although Michigan gained 380,000 people, there are records for a gain of 680,000 as a natural increase due to the number of births over deaths. The difference is a net out-migration of 300,000 (MIC, Information Bulletin 1982-14). Nationally, net inter-regional migration data reveals a shift of 5,195,000 people from the North Central and Northeast states to the South and West (MIC, Information Bulletin 1982-7).

Naisbitt (1982) believes that the North-South shift is in part a shift from an industrial to an information based society. This is supported by the National Planning Association, predicting 30 million new jobs by the year 2000 with percentage gains of the Southwest states above 30% (U. S. News and World Report as cited in AACJC Letter, 1982). The

North's manufacturing economy has been hardest hit while the West offers a higher percentage of college graduates as a human resource. Furthermore, Naisbitt maintains that the shift is irreversible in our lifetime.

Enrollment Projections

Projections of 25 to 50 percent decreases between 1980 and 1997 have been made by different educational commissions. If the decrease were 50 percent, almost all institutions would suffer severe setbacks. Most agree there will be a decline in students 18 to 24 because of a stabilization of high school graduates and a decrease in returning veterans. There will be an increase, however, in mature females, blacks and Hispanics. There should also be some increase in high school students taking college courses. Better retention of students, more part-time students, and more foreign students is expected (Carnegie Council, 1982).

The Carnegie Council on Policy Studies in Higher Education projects a 5 to 15 percent decrease in FTE undergraduates from 1978 to 1997. This will occur in two "slides." The first slide, which will be 40 percent of the total decline, will occur between 1983 and 1989. Following a plateau from 1989 to 1991, the second slide will occur until 1997. Between 1997 and 2010 there should be a recovery period to the present enrollment level. The Carnegie Council, however, states that the variables involved could change these projections. The colleges could have a profound impact on these projections by actively changing some of their current policies.

Curriculum Changes

One of those variables of influence is the curriculum offerings of educational institutions, and their ability to respond to society's needs.

Information Technology

We are fast becoming an information-based society. Of the 19 million new jobs created in America in the 1970's, only 11 percent were goods-producing (Naisbitt, 1982). Naisbitt expands on this concept, saying:

> An industrial society pits man against fabricated nature. In an information society--for the first time in civilization--the game is people interacting with other people. This increases personal transactions geometrically, that is, all forms of interactive communication. (p. 19)

The expanded use of computers; interactive cable television; fiber optics in teleconferencing and transmitting data; and the "staggering array of information technologies in place and projected" (p. 2) will certainly have a profound effect on society as a whole and education in particular in the coming decades (Waggoner, 1982).

The atmosphere of technology surrounds the student of today. Television, video games, home computers, automated bank tellers and check-out counters, watches with alarms, stop-watches and calculators--these and many more demonstrate that, "today's college student is coming to expect technological sophistication in his environment" (Waggoner, p. 19).

Literacy Decline

National trends, however, indicate that our students have less than minimum qualifications. Naisbitt points out that, "In this literacy-intensive society, when we need basic reading and writing skills more than ever before, our education system is turning out an increasingly inferior product" (p. 19).

Scholastic Aptitude Tests average scores for college-bound seniors confirm this. Verbal skills dropped from 466 in 1967 to 424 in 1980 (Gannon, 1982). This problem has precipitated desperate measures on the part of large corporations. They are entering the education field. Approximately 300 large companies in the United States provide remedial instruction in English and basic math for their laborers (Naisbitt, 1982).

Dr. Philip Gannon states that the large numbers of high school drop-outs, plus the dramatic increase in the number of immigrants, has thrust a "large segment of functionally illiterate people into our society. Educating this group...creates a monumental task for our educational system..." (p. 4).

He projects that a "major remediation program" must be initiated in the 1980's in order to train people for the rapidly changing job market and an increasingly complex technological society (Gannon, 1982).

Mathematics and Science

In addition, at a time when we are entering an era that will demand technological skills in so many areas, there has been a significant decline in the number of students with basic competency in mathematics and science. The SAT scores for math and science dropped from 492 in 1967 to 466 in 1980 (Gannon, 1982).

The U. S. Department of Education and National Science Foundation issued a report in 1980 warning us that this country is progressing toward "virtual scientific and technological illiteracy." This report blamed lack of qualified high school teachers and a much worse shortage

of college computer and engineering instructors. This problem is exacerbated when we consider that three-fourths of all occupations will directly or indirectly involve computers as early as 1985. Obviously, anyone who is ignorant of the language of computers will be at a distinct disadvantage (Naisbitt, 1982).

Language

Over the past few decades language requirements have been dropped from many four year college programs. This has had a rippling effect on community colleges and high schools across the nation. Many language teachers have had to retrain or leave the education field. And, of course, far fewer students have knowledge of languages other than English.

This situation has occurred at precisely the wrong time, when communications will be needed world-wide in the very near future. Naisbitt (1982) states, "For Americans, it is self-evident that this is the time to learn another language--and learn it well " (p. 76). He further warns us that we will have to become "trilingual" in English, Spanish, and "computers."

Life-long Learning

Our changing technology will also force many people to return to college more than once during the course of their lives. With robots and the decline of industries making many jobs obsolete, and with many new positions being created, training and retraining will be a necessity. Added to this is the fact that life expectancy is now over seventy years. It is expected that people will have two or three careers during the course of their lives (Dickson, 1975).

Naisbitt (1982) reinforces this by saying:

> The rapid change ahead also means that you cannot expect to remain in the same job or profession for life, even if it is is an information occupation. The coming changes will force us to seek re-training again and again. (p. 37)

This leads directly to the age-old question in education: Should a college train its students for specific careers, or should it provide them with general skills which they can apply to any specific occupation? Perhaps the answer, during this period of drastic changes in the way we work, recreate, and even think, is to do both.

Clearly, the new technology demands some form of training and re-training. But it is also clear that those who have mastered the basics of math, science, and English, and have become able "to think" will be the most adaptable in re-training, and will be the first hired.

Naisbitt (1982) states, "We are moving from the specialist who is soon obsolete to the generalist who can adapt" (p. 37).

Cohen and Brawer (1982) say it was the idea of life-long learning that caused the reduction in general education requirements, and it may cause their return:

> ...it is precisely the older students who perceive the need for general education, even while they seek upgrading within their own careers. They know that employment depends less on skill training than on the ability to communicate and get along with employers and co-workers (p. 326).

Human Potential Movement

One common complaint about our complex world, with its large institutions, computers, robotics, telecommunications and many other trends, is that we are becoming much too impersonal. Many feel that the individual is lost in the shadow of these giants. Naisbitt takes issue with this complaint. He feels that:

> Our response to the high tech all around us was the evolution of a highly personal value system to compensate for the impersonal nature of technology, the result was the new self-help or personal growth movement, which eventually became the human potential movement. (p. 40)

Many of the community college students who have interests in art, literature and music are those who have already graduated from college. Cohen and Brawer (1982) feel that more and more adults in general are coming to college to take courses in art, science, environment, humanities and personal development.

Cetron and O'Toole (1982) agree that original artists will receive much more compensation than they have in the past or present.

Responsibility of the Community Colleges

Although the problem of declining student abilities is a national one, it rests heavily on the community colleges for solutions. Cohen and Brawer (1982) confirm that community colleges have "born the brunt of the poorly prepared students in the twentieth century" (p. 230). They go on to suggest possible reasons for declining abilities.

> Suffice it to say that numerous events came together: the coming of age of the first generation reared on television; a breakdown in respect for authority and the professions; a pervasive attitude that the written word is not as important as it once was; the imposition of various other-than-academic expectations on the public schools; and a decline in academic requirements and expectations at all levels of schooling. This last is worthy of elaboration because it is the only one that is within the power of the schools to change directly. (p. 226)

Adding to this problem, of course, is the fact that community colleges and secondary schools have very little articulation, if any. In an era boasting some of the most advanced, instantaneous methods of communication in history, and at a time when the need seems greatest, there is relatively little communication between these partners in education.

At the same time, community colleges cannot forsake their orientation to occupational training.

> ...the need for skilled blue-collar workers and white-collar service workers remains great. Some examples of future occupational growth include: health careers, laser technology, robotics, word-processing, management, and cable technology. Community colleges continue to lead in efforts to provide skill training in these occupations... Re-training and upgrading those currently employed will take on increasing importance as occupations decline and expand. (Lapin, 1982, p. 16)

Cetron and O'Toole (1982) say, "...the worker who accepts technology and is willing to retrain for jobs of the future is far more likely to be employed than the worker who fights it" (p. 267).

Cohen and Brawer (1982) feel that the community college will have to change in "career, compensatory and community education programs" as well as maintaining the "degree-credit liberal arts classes that demand literacy" (p. 304).

Career Projections

A look at the work force of the future is extremely intriguing. The following are just samplings of the many new types of positions that will become available in the next few decades.

Computers

Hundreds of industries have started or been enhanced by the modern computer, and thousands of occupations have or will be created because of it. For example, Cetron and O'Toole (1982) believe the robotics world will depend on the computer programmers of software. Also, the microprocessing chip has started products like talking toys, pocket computers, programmed washing machines and switchboards. By the year 2000 there will be over one million new computer programmer positions.

Naisbitt (1982) believes this will occur by 1992. Also, "systems analysts, programmers, and service technicians must grow at least 100 percent before the decade is over" (p. 36).

Telecommunications

Telecommunications grew out of the unbelievable growth of the computer industry into a world-wide industry. Sales of 40 billion in 1980 are projected to quadruple by 2000. The telecommunications industry will be the largest in the world.

> Telecommunications will change the way people work, the way they learn, teach, shop, travel, the way they are entertained, and the way they get social and legal services, medical treatment and health care, and even the way they get old. (Cetron and O'Toole, 1982, p. 213)

One feature of telecommunications is voice recognition, which will eliminate many of the typical tasks of secretaries. This machine can take dictation and type it, translate into different languages, answer the phone, and even provide for teleconferences.

Another feature is the cable which provides for two-way communications and will allow many to work, shop, vote and educate themselves at home (Cetron and O'Toole, 1982).

Robotics

Robots will revolutionize our industries and replace many laborers. By 1990 we will be producing 17,000 robots a year (Naisbitt, 1982). They will revolutionize industry because the cost of labor is reduced and productivity is raised. "Smart" robots will be able to replace five production workers. By the year 2000 over one million robots will be working in American industries, replacing 4.4 million laborers. But robotics will also create thousands of new occupations.

By the year 1990 over 1.5 million robot technicians will be hired to produce, test, and maintain robots. Hazardous duty robots will be created for the nuclear, mining, genetic, underwater and space fields. Robots will also be used as toys and teachers (Cetron and O'Toole, 1982).

Other Technicians

The number of laser technicians is expected to reach 2.5 million by 1990. This field will become one of the nation's largest businesses. Conservation technicians will be needed for 100,000 jobs in 1990, and hazardous waste technicians will have 1.5 million new jobs by 2000.

Over 1.3 million paramedics will be needed by 1990 because technology will reduce the need for many doctors and nurses. Original artists and professional athletics will be among the highest paid professions in the nation because of cable television (Cetron and O'Toole, 1982).

Gene-splicing has been called "the most awesome and powerful skill acquired by man since the splitting of the atom " (Naisbitt, 1982, p. 73), and will be used to create substitutes for many raw materials such as oil and coal. There will be 150,000 new genetic engineering technicians by 1990, but the potential positions for this new field are almost unlimited. Synthetic interferon, insulin, human growth hormones, new antibiotics and anticoagulants have already been produced (Cetron and O'Toole, 1982).

The Contract Research Corporation (Detroit Free Press, January 29, 1983) projected other new occupations as: child advocate, crystal manufacturing, energy efficiency technician, housing rehabilitation specialist, industrial hygiene technician, nuclear quality assurance inspector, and podiatric assistant.

Orth and Russell projected many positions will be available as: case manager for the mentally disabled, energy-related occupations, laser optics technician, microprocessor-related occupations, and tumor registrar (Detroit Free Press, 1983).

Naisbitt (1982) also sees an appalling need for maintenance technicians for planes, utilities, buses, sewage treatment plants and nuclear power plants now and in the future.

Finally, since in 1950 there were only 93,000 new businesses created in the United States and in 1980 there were 600,000, it is anticipated that many, many more new small businesses in all areas will be started in the next few decades. Entrepreneurial and management skills will be in high demand (Naisbitt, 1982).

Funding of Community Colleges

Throughout much of the post-World War II era, higher education and in particular community colleges have experienced a prosperity and growth which now is being challenged and threatened.

> Not so long ago, in 1950, higher education was half public and half private as measured by enrollments. Nationally, it is now four-fifths public and one-fifth private, with great state-to-state variations...The public community colleges have been the great gainers over the past two decades in terms of enrollments. (Carnegie Council, 1980, p. 14)

The forces causing uncertainties are identified by Breneman and Nelson (1981) as stabilizing or declining enrollments due in large part to the projected 25 percent drop in traditional college-age population, general economic trends, policy decisions affecting public support of higher education and on-campus educational decisions.

The period from the late 1960's to the present has been a period of greater financial strain for higher education than the preceding 37 years. By and large, the leading research universities were adversely affected the least in contrast to the impact on private four-year and two-year colleges (Carnegie Council, 1980).

Inflation rates, changing national fiscal directions, declining worker productivity, and spiraling energy costs, have generated enough uncertainties, according to Breneman and Nelson (1981) to contribute to taxpayer resistance and a decline in support to public education.

They state that the recent downward trend in state and local government expenditures seem likely to continue. Education will be a likely candidate for budget cuts, particularly when enrollments decrease.

Community colleges have been funded over the years by shifting proportions of tuition, local taxes and state revenues. Cohen and Brawer (1982) suggest that the variation among states is so wide that support patterns cannot be considered indicative for any of them. While Cohen and Brawer point to a trend that has seen the states picking up an increasing share of funding, that trend is certainly reversible. A look to the State of Michigan's economic downturn in the last several years and subsequent decline in educational revenues profoundly illustrate this point.

Cohen and Brawer (1982) cite Breneman and Nelson's examination of community college funding patterns, noting that no one system can accommodate all purposes. They categorized choices available in defining financing plans: (a) state funding versus a combination of state and local funding; (b) tuition as a fixed percentage of costs; (c) negotiated budgets versus

following statutory formulas; (d) financing credit courses only or funds for non-credit; (e) isolate community colleges or support them relative to other segments of higher education; (f) deriving a formula based on recovery costs, attendance, credit hours, or other measures.

The Brookings Study has been one of the most noteworthy attempts to apply economic perspective to funding issues using the criteria of efficiency and equity to evaluate various financial methods. Breneman and Nelson's work on the Brookings Study summarized some recommendations worth citing:

> Remedial education should be tuition-free because it is a true extension of lower school work, which is tuition-free; occupational programs providing training for particular industries should receive at least partial support from the industries that benefit; community education primarily for personal enrichment should be self-supporting;...student aid should be restricted to students enrolled at least half-time; and finance formulas should be devised to reflect differences in program costs and differences in unit costs associated with college size. (Cohen and Brawer, 1982, p. 132)

Cohen and Brawer highlight Lombardi's position by emphasizing that after his study of the history of tuition charges, the issue was not whether tuition should be charged but how much. A recent report on higher education appearing in Administrator (1983) supports the contention that colleges and universities will be more reliant in the future on tuition and fees.

The pressure for increasing tuition according to Cohen and Brawer (1982) has usually come from state legislators seeking ways of holding down appropriations and emphasizing the "pay-for-your-own-benefit" plan.

The financial resources of many institutions will be under pressure as seldom before. Lower enrollments will reduce total income from tuition and state support alike. Costs per student will rise as these costs are spread over fewer students (Carnegie Council, 1980).

Although controlling expenditures has been difficult because education is labor-intensive, it is not impossible. If it were, expenditures would not differ from college to college as much as they do (Cohen and Brawer, 1982).

Alfred (1982) identifies the issue of the appropriate revenue mix, particularly in regions experiencing economic decline. He asks what additional revenue sources can be located to diversify the resource base thereby avoiding excessive dependence on a single source.

As reported in the Intercollegiate Press Bulletin, Yankelovich (1983) states that the trend to continually squeeze the government will yield to one which looks to business and industry for support. There is considerable opportunity for community colleges to develop training partnerships with the nation's small businesses (Eliason, 1983). Watcke (1983) states that a number of community colleges have been successful in developing alliances with high technology industries. Alfred (1982) supports this contention: business and industry are increasingly looking to the community colleges for training.

Political Notes

Some college leaders have recognized that political factors can be more important than economic ones in determining community college financing. Community colleges should cooperate with other sectors of higher education in a united front rather than "solo" it (Carnegie Council, 1980). Cohen and Brawer (1982) point out that community colleges have trouble competing with universities for legislative support and, thus, are turning to local constituents, seeking linkages at the grass roots level.

Smith (1983) suggests that legislators are becoming less easily persuaded by traditional funding arguments of "more of the same." He argues that the private sector is spending more on education and training than the public sector. The marketplace will determine whether the community college can be successful and be responsive to business and industry needs. All institutions should try to maximize their private sources of funds (Carnegie Council, 1980).

Harlacher and Gollattscheck are cited by the Carnegie Council as recommending that community colleges become intimately involved and cooperate in joint ventures with all sorts of local agencies.

Marketing

Through the periods of rapid growth, marketing at community colleges was more of an information campaign than a competitive edge. More recently, the reduction of the traditional college population and the resulting changes in student composition have brought marketing into focus (Cohen and Brawer, 1982). The mass student market has become more important, particularly for the community colleges, but most colleges have placed additional emphasis on it (Carnegie Council, 1980).

Johnson (1979) notes that all post-secondary institutions are now required to reexamine the student supply/demand factors. Four-year institutions have begun to expand their extension centers, lower their admission standards, and search for "new students." These non-traditional students have long belonged to community colleges, but are now seen as a possible solution to declining university enrollments. Campbell and Korim (1979) document the growing four-year college interest in occupational training and associate degrees. The community college must

respond with new options if they are to survive. As in no other time, they must consider the adoption of a true marketing approach (Wofford and Timmerman, 1982). Kotler (1975) defines marketing as:

> ...the analysis, planning, implementation, and control of carefully formulated programs... It relies heavily on designing the organization's offering in terms of the target markets' needs and desires, and on using effective pricing, communication, and distribution to inform, motivate, and service the markets. (p. 5)

Eugene Kelley, President of the American Marketing Association, predicts that all businesses will become more reliant on marketing and marketing research throughout this century. He reiterates that this is "not just in the technical sense. Not just trying to sell, price and promote a product. Management will need to take full advantage of marketing's strategic options." He identifies market researchers as "the intelligence force for business," the "planning information suppliers," the "strategic lifeline," and "students of the environment of the marketplace." He further challenges market researchers to become futurists, reflecting on what is happening in society and the world (Marketing News, 1983, p. 10).

Johnson (1979) states that non-profit marketing research in higher education must assume the stature that marketing research holds in the corporate world. It must deal with "internal evaluation and change and measure external needs by completing regular assessments and by identifying new service opportunities" (Johnson, 1979, p. 59). In another article, he attests that marketing "assures quality through analysis and change. When times are difficult, quality becomes even more important" (Johnson, 1982, p. 31).

Community colleges across the nation are becoming creative and innovative in the marketing approach. Lane Community College in Oregon has successfully used the quality circle concept to increase productivity (Johnson, 1982). Des Moines Area Community College utilized media atypical to education. They have organized orchestrated campaigns for public information. One measurement of their success was public support in the passage of their millage levy (Clarkson, 1980-1981).

The advantages of non-profit marketing have included the building of public confidence, staff involvement and pride, and factual information to aid in planning and decision-making. Sophisticated analysis of markets can improve student retention rates, suggest better recruiting techniques, and establish ties with businesses that will encourage their workers to take advantage of tuition aid plans (Maeroff, 1979).

Conclusion

With the staggering numbers of changes in our society occurring now and projected for the future, it is clear the colleges must be prepared to meet these exciting challenges. The traditional master planning approach of colleges across the country will not suffice. Douglas Eadie (1982) tells us we must abandon the formal rigid plans of the past and adopt the more flexible, sometimes courageous method of "strategic" planning for the future.

Naisbitt (1982) tells us that businesses across the country are now turning from their traditional short-term goals to longer term goals. He suggests that organizations use the "law of the situation" technique of asking what business they are really in and what business would it be useful to conceptualize themselves in.

Enrollment slumps, collective bargaining agreements, redefined taxpayer priorities, legislative scrutiny, declining academic performance, and the advent of student consumerism along with the new technologies are forcing us to be prepared for change. The Educational Testing Service has urged community colleges to point a large percentage of their institutional research toward the future. They should study enrollment, career programs, economic impacts, and curricular needs by re-establishing college goals, setting up regular plans along with means to appraise new programs and procedures (Cohen and Brawer, 1982).

Eadie (1982) says strategic planning involves the "continuance of change" related to comprehensive organization purposes, focused on the future, and that it must involve environmental scanning and analysis. "It is aimed consciously at the generation of new 'business' not making existing business more productive" (p. 27).

Baldridge, Curtis, Ecker and Riley (1978) conducted a major study of American colleges and universities under a grant from the National Institute of Education. They state specifically that colleges and universities are increasingly affected by environmental changes and pressures. The ability to adapt is contingent upon the ability to understand change, to quantify change, to forecast change, and to determine the implications of change. Baldridge et al offer the following recommendations:

> Independently or through cooperative inter-campus agreements, colleges and universities should develop comprehensive institutional research programs. These programs must be expanded beyond the simple "counting" function that currently prevails, into the areas of needs assessment, policy analysis, evaluation of institutional mission and impact, and forecasting.
>
> Although national and regional trends in environmental changes are important to understanding the broad context of current changes, almost all colleges and universities should conduct locally oriented studies...There must be more care in contrasting local trends with

> national trends in order to make informed judgments about shifts in the client pool, shifts in public attitude and support, and shifts in demand for educational services and products. (p. 225)

Perhaps it's time to give some very serious thought to our own institution in adapting to environmental changes. We may ask ourselves some questions, such as: What level of importance do we attribute to environmental changes? What mechanisms do we utilize to monitor them? How involved is our staff in understanding the forces in play? How do we enact responses? And, most importantly, what will happen if we do nothing?

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